Ideal extraction temperature for antioxidants from holy basil and bunching onion

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Abstract

This study aimed to determine ideal temperature for antioxidants from holy basil and bunching onion. Holy Basil (Ocimum Tenuiflorum) and Onion (Allium Fistulosum) were extracted with various temperatures ranging from 75 - 100 degrees C with two solvents i.e. methanol and water (room temperature & boiling). Total phenolic contents (TPC) and total flavonoid contents (TFC) were determined in the extracts by using the Folin-Ciocalteau and Aluminum chloride complex formation assays respectively. Extracts were analyzed in triplicates statistically compared using one-way analysis of variance (ANOVA) and the difference between the mean was ascertained at 95% confidence interval (P<0.05) using Tukeys honest significance test. In both holy basil and bunching onion, the TPC and TFC values for methanolic extracts were significantly (P<0.01, P<0.001) higher than the water extracts. The best temperature among the various temperature used was 8.5 degrees C where maximum TPC and TFC were observed in the extracts. This study shows that using optimum temperature helps in extraction of maximum antioxidants with methanol.

Keywords

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